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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/558,934	12/02/2005	Tadahiro Ohmi	5016-0102PUS1	6405
2292	7590	12/29/2009	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				MERLIN, JESSICA M
ART UNIT		PAPER NUMBER		
		2871		
NOTIFICATION DATE			DELIVERY MODE	
12/29/2009			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/558,934	OHMI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	JESSICA M. MERLIN	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 September 2009.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.  
 4a) Of the above claim(s) 13-21 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-12, 22 and 23 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 02 December 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/11/2009</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Receipt is acknowledged of applicant's amendment filed September 14, 2009. Claims 1-23 are pending and an action on the merits is as follows.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-5 and 7-12, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Mino (JP 10-209463)**

**In regard to claim 1,** Mino discloses a substrate, comprising (*see e.g. Figure 1*):

a transparent base **1**,

a transparent film **3** deposited directly on the transparent base **1**, in which a groove in the transparent film **3** (*volume occupied by 2a+2b*) is formed to reach a main surface of said transparent base **1**, and

a wiring portion **2a and/or 2b** formed in said groove and in contact with said transparent base **1**,

wherein said groove has a maximum width and a minimum width, and

said wiring portion **2a and/or 2b** in said groove has a width and a thickness determined by correlation with the maximum width and the minimum width of said groove.

**In regard to claim 2,** Mino discloses said transparent film is made of a transparent resin (*see e.g. paragraph [0027]*).

**In regard to claim 3,** Mino discloses said transparent film is made of a photosensitive transparent resin (*see e.g. paragraph [0027]*).

**In regard to claim 4,** Mino discloses said wiring portion is transparent or opaque (*see e.g. paragraph [0025]*).

**In regard to claim 5,** Mino discloses said transparent film contains inorganic *matter* (*see e.g. paragraph [0027]*).

**In regard to claim 7,** Mino discloses a surface of said transparent film and a surface of said wiring portion are substantially flush with each other (*see e.g. Figure 1*).

**In regard to claim 8,** Mino discloses when the maximum width and the minimum width of said groove in transverse section are represented as W1 and W2, respectively, a maximum wiring width Wi of said wiring portion in said groove has a relationship of  $W2 \leq Wi \leq W1$  (*see e.g. Figure 1 and note that the width of the wiring falls between the maximum and minimum widths of the grooves since it is filling the groove*).

**In regard to claim 9,** Mino discloses a thickness of said wiring portion in said groove at the maximum wiring width Wi is represented as ti, a thickness of said transparent film is represented as tl, and a thickness of said transparent film at a position of an average width  $((W1+W2)/2)$  of said groove is represented as t2, the thickness ti at a position of said maximum wiring width falls within the range of  $t2 \leq ti \leq tl$  (*see e.g. Figure 1 and note that the wiring is flush to the substrate and the top of the transparent film*).

**In regard to claim 10,** Mino discloses said transparent base is made of a glass or a plastic material (*see e.g. paragraph [0025]*).

**In regard to claim 11,** Mino discloses a display device manufactured using said substrate according to claim 1 (*see e.g. paragraph [0024]*).

**In regard to claim 12,** Mino discloses said display device is a liquid crystal display device or an EL display device (*see e.g. paragraph [0024]*).

**In regard to claim 22,** Mino discloses the wiring portion formed in the groove is a single-layer structure (*see e.g. Figure 1 and note that the groove portion with electrode 2a is considered as a single-layer structure*).

**In regard to claim 23,** Mino discloses wherein:  
the wiring portion formed in the groove is a single-layer structure (*see e.g. Figure 1 and note that the groove portion with electrode 2a is considered as a single-layer structure*); and  
a thickness of said wiring portion in said groove at the maximum wiring width  $W_i$  is represented as  $t_i$ , a thickness of said transparent film is represented as  $t_l$ , and a thickness of said transparent film at a position of an average width  $((W_1+W_2)/2)$  of said groove is represented as  $t_2$ , the thickness  $t_i$  at a position of said maximum wiring width falls within the range of  $t_2 \leq t_i \leq t_l$  (*see e.g. Figure 1*).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mino (JP 10-209463) in view of Odemura (JP 2001-188343 A).**

**In regard to claim 6,** Mino discloses the above limitations and said transparent film contains a radiation-sensitive component (*see e.g. paragraph [0027]*).

Mino fails to disclose said transparent film is formed using a resin composition comprising an alkali-soluble alicyclic olefin resin.

However, Odemura discloses said transparent film is formed using a resin composition comprising an alkali-soluble alicyclic olefin resin (*see e.g. abstract*).

Given the teachings of Odemura, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the display device of Mino with said transparent film is formed using a resin composition comprising an alkali-soluble alicyclic olefin resin.

Doing so would provide a photosensitive resin composition that is easily micro-patterned and has excellent thin film properties such as flatness, heat resistance, transparency and chemical resistance (*see e.g. abstract*).

***Response to Arguments***

6. Applicant's arguments filed September 14, 2009 have been fully considered but they are not persuasive.

7. In regard to independent claim 1, applicant's arguments, on pages 7-11 of the Remarks, that the previously applied prior art rejection fails to disclose all of the limitations of claim 1, as newly amended, have been fully considered and are appreciated. Specifically, applicant argues

that Mino discloses the wiring of pattern 2a is formed before depositing and patterning the transparent film. However, the examiner respectfully disagrees. Although, Mino discloses a method of manufacture that is different from the applicant's disclosed method, applicant elected the device claims in the response to the Election/Restriction filed on August 27, 2008. Therefore, Mino discloses a device that meets all of the device limitations of claim 1, as newly amended, as cited above.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA M. MERLIN whose telephone number is (571)270-3207. The examiner can normally be reached on Monday-Friday 6:30AM-4:00 PM.

Art Unit: 2871

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. M./  
Examiner, Art Unit 2871  
Jessica M. Merlin  
December 18, 2009

/David Nelms/  
Supervisory Patent Examiner, Art Unit 2871